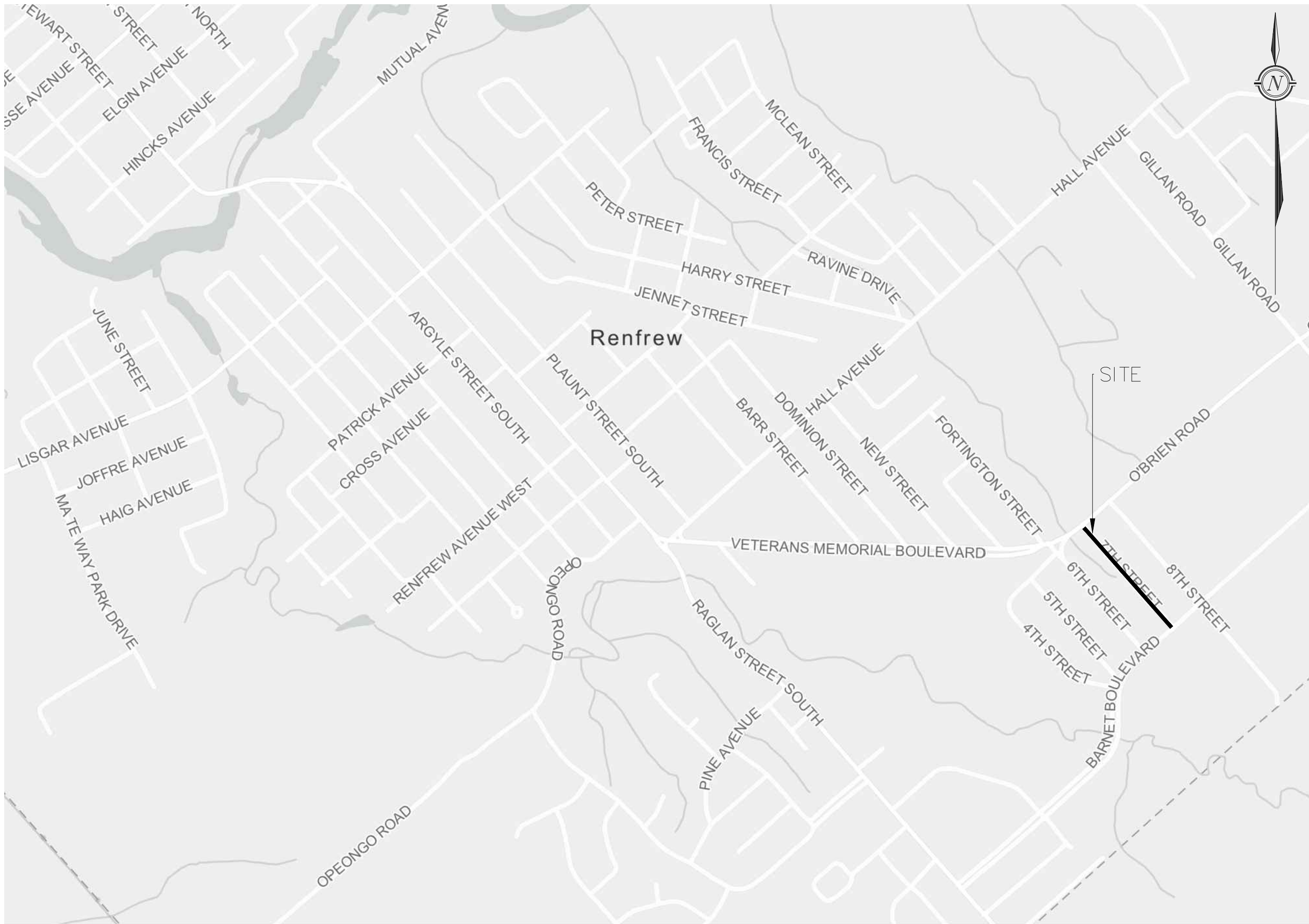


SEVENTH STREET ROAD RECONSTRUCTION

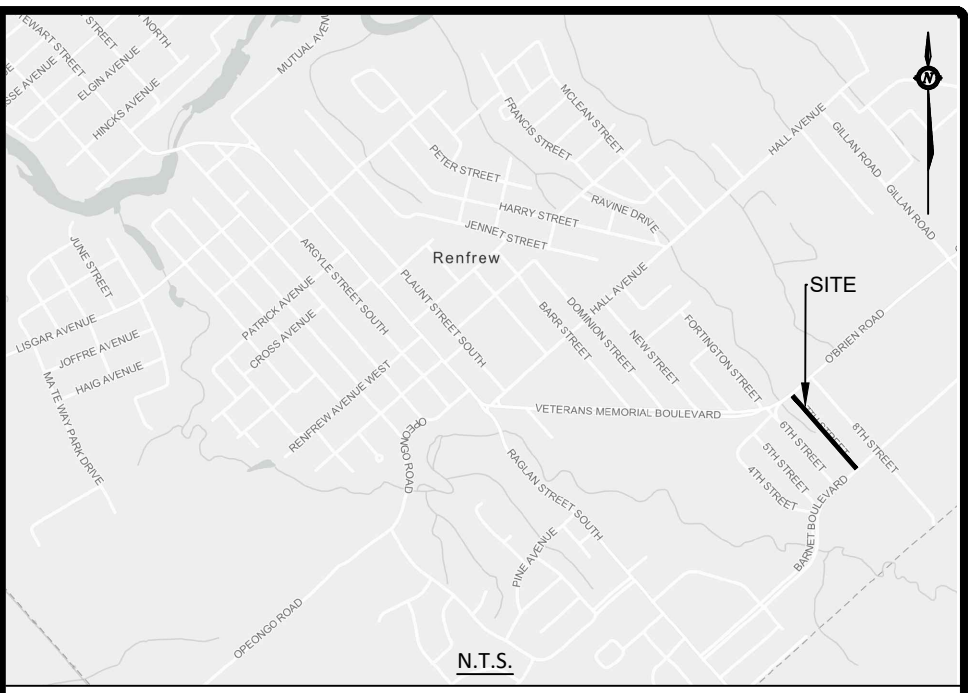
TOWN OF RENFREW TENDER NO. 2024-23-DEI



KEY PLAN
N.T.S.

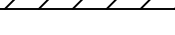
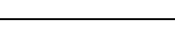
INDEX	
TENDER No. 2024-23-DEI	
DWG. No.	DESCRIPTION
C-01	REMOVALS
C-02	NEW CONSTRUCTION
C-03	TYPICAL SECTIONS AND DETAILS
C-04	WATERMAIN LOOPING

RE-ISSUED FOR DESIGN REVIEW
OCTOBER 11, 2024



N.T.S.
KEY PLAN

LEGEND

- | | |
|---|--|
|  | FULL DEPTH ASPHALT REMOVAL |
|  | PARTIAL DEPTH ASPHALT REMOVAL |
|  | CONCRETE PAVEMENT REMOVAL |
|  | REMOVE AND SALVAGE UNIT PAVERS FOR REINSTATEMENT |
|  | GRADING LIMITS |
|  | ADJUST MANHOLES AND CATCHBASINS |
|  | |

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

2	RE-ISSUED FOR DESIGN REVIEW	2024-10-11
1	ISSUED FOR PREMILIARY DESIGN REVIEW	2024-05-31
No.	Revision/Issue	Date

Check and verify all dimensions before proceeding with the work	Do not scale drawings
---	-----------------------



115 Walgreen Road
RR3, Carp, ON K0A 1L0
Tel: 613-836-2184
Fax: 613-836-3742

Stamp:	Stamp:
--------	--------

Client:  **Renfrew**
INC • 1850
Bridging Charm and Convenience

Project:

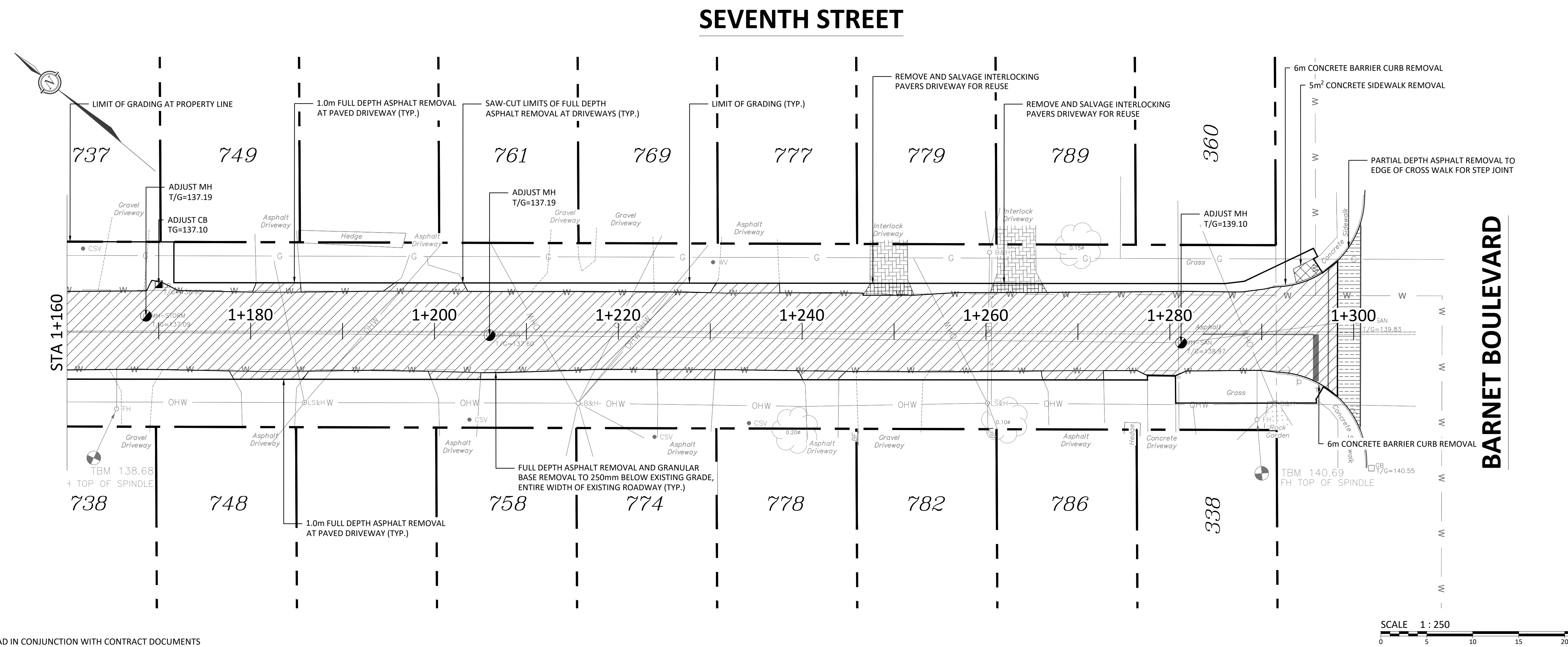
SEVENTH STREET ROAD RECONSTRUCTION

RENFREW ONTARIO

Drawing Title:

REMOVALS

Scale:	1:250	Project Number: 2024-23-DEI
Drawn by:	MV	
Checked By:	AS	
Designed By:	MV	
Date:	OCTOBER 11, 2024	Drawing Number: C-02
		SHEET 1 of 4



BARNET BOULEVARD

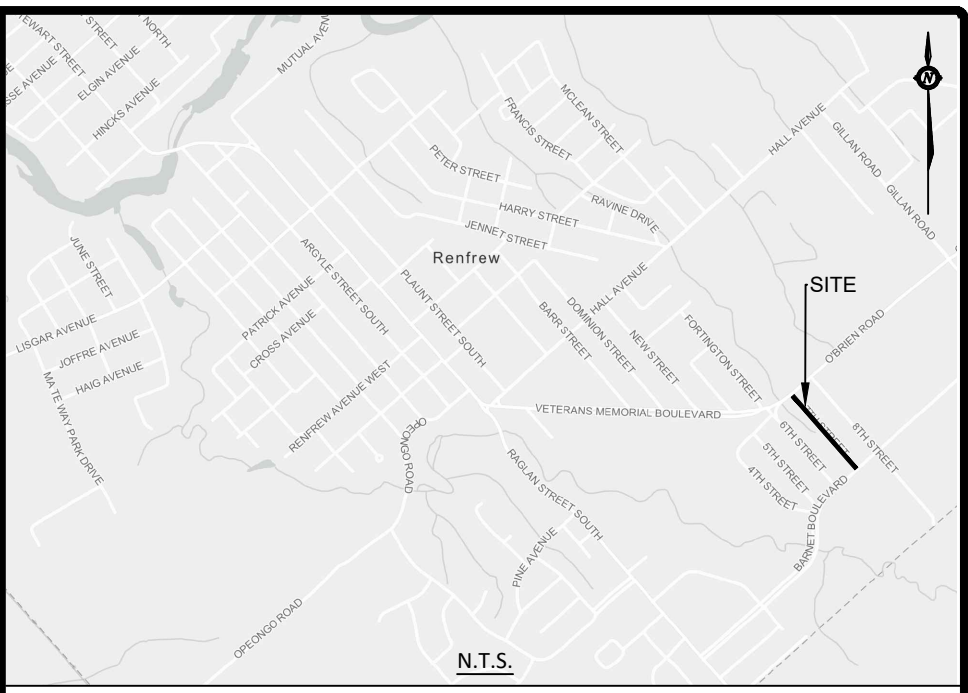
SCALE 1 : 250



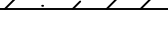
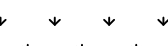
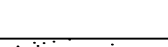
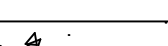
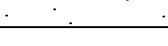
0 5 10 15 20 25 Metres

FILENAME: C:\Users\m.verchOneDrive - EGIS Group\CCO-25-1086 Renfrew - Seventh St\04 CAD & GIS\03 - Contract Drawings\25-1086-REM.dwg
LAST SAVED: Friday, October 11, 2024 LAST SAVED BY: m.verch
LAST PLOTTED: Friday, October 11, 2024 CTRFILED: ----

TO BE READ IN CONJUNCTION WITH CONTRACT DOCUMENTS



LEGEND

- | | |
|---|---------------------------------|
|  | PAVEMENT RECONSTRUCTION |
|  | 100mm TOPSOIL AND SOD |
|  | GRANULAR A REINSTATEMENT |
|  | CONCRETE PAVEMENT REINSTATEMENT |
|  | UNIT PAVER REINSTATEMENT |
|  | ADJUST MANHOLES AND CATCHBASINS |

NOTES:

1. CONTRACTOR TO ENSURE POSITIVE DRAINAGE

FOR REVIEW ONLY
NOT FOR CONSTRUCTION



2	RE-ISSUED FOR DESIGN REVIEW	2024-10-11
1	ISSUED FOR PRELIMINARY DESIGN REVIEW	2024-05-31
No.	Revision/Issue	Date

Check and verify all dimensions before proceeding with the work



115 Walgreen Road
RR3, Carp, ON K0A 1L0
Tel: 613-836-2184
Fax: 613-836-3742

Stamp

Stamp

Client:



Renfrew
INC • 1858
Bridging Charm and Convenience

Project

SEVENTH STREET ROAD RECONSTRUCTION

RENFREW ONTARIO

Drawing Title:

NEW CONSTRUCTION

Scale:	1:250	Project Number: 2024-23-DEI
Drawn by:	MV	
Checked By:	AS	
Designed By:	MV	
Date:	OCTOBER 11, 2024	Drawing Number: C-02
		SHEET 2 of 4

FILENAME: C:\Users\m.verchOneDrive - EGIS Group\CCO-25-1086 Renfrew - Seventh St\04 CAD & GIS\03 - Contract Drawings\25-1086-NEW.dwg
LAST SAVED: Friday, October 11, 2024 LAST SAVED BY: m.verch
LAST PLOTTED: Friday, October 11, 2024 CTRFILED: ----

The diagram illustrates a cross-section of a road reconstruction project. Key features include:

- Centerline (C.L.):** The central vertical line of the road.
- Right-of-Way (ROW):** The boundaries of the project area on both sides.
- Driveway / Grass Blvd. Reinstatement:** Located on the left side, with a note: "CONTRACTOR TO ENSURE POSITIVE DRAINAGE".
- Original Ground (O.G.):** Indicated by a dashed line on the left and right sides.
- Gravel Base:** A layer of gravel with a 2% slope, labeled "2%" on both sides of the centerline.
- Granular Base:** A layer of granular material with a 6% slope, labeled "6%" on the right side.
- Gravel Shoulder:** A shoulder on the right side, labeled "RE-GRADE AND PLACE 150mm GRANULAR A AT SHOULDER".
- Dimensions:**
 - VARIES 1.00m TYP. (Typical)
 - 4.25m (Width of the gravel base on each side of the centerline)
 - VARIES 2.00m TYP. (Typical) (Width of the gravel shoulder on the right side)
- Materials and Layers:**
 - REMOVE 250mm, FULL DEPTH ASPHALT AND GRANULAR BASE
 - CORRECT CROSS-FALL
 - 50mm SP12.5 LEVEL B PGAC 58-34
 - 50mm SP19 LEVEL B PGAC 58-34
 - 150mm GRANULAR A
- Notes:**
 - 5% VARIES (MAX 6%) (Slope of the driveway/grass area)
 - N.T.S. (Not To Scale)

Diagram illustrating the cross-section of a road construction project, showing the removal of existing asphalt and granular base, and the replacement with a new cross-fall.

The diagram shows the following components and dimensions:

- ROW** (Right of Way) lines on both sides.
- VARIES 1.00m TYP.** (Typical) dimensions for the shoulder areas.
- 4.25m** dimensions for the main road width on both sides of the centerline.
- C.L.** (Center Line) marking the center of the road.
- 5% VARIES (MAX 6%)** slope for the shoulder areas.
- 2%** slope for the main road width.
- 5%** slope for the main road width.
- REMOVE 250mm, FULL DEPTH ASPHALT AND GRANULAR BASE** (indicated by a dashed line).
- CORRECT CROSS-FALL** (indicated by a solid line).
- 50mm SP12.5 LEVEL B PGAC 58-34** (top layer of the new cross-fall).
- 50mm SP19 LEVEL B PGAC 58-34** (middle layer of the new cross-fall).
- 150mm GRANULAR A** (bottom layer of the new cross-fall).
- O.G.** (Original Ground) line shown on the left and right.
- DRIVEWAY / GRASS BLVD. REINSTATEMENT CONTRACTOR TO ENSURE POSITIVE DRAINAGE** (indicated by a dashed line).
- * REFER TO CROSS-FALL CORRECTION TABLE** (note).
- N.T.S.** (Not To Scale) label.

The diagram illustrates a cross-section of a road construction project. Key features include:

- Top Surface:** A horizontal line representing the existing ground level (O.G.).
- Subbase Extension:** A 1.00m extension of the subbase on the left side, indicated by a horizontal arrow.
- Grass Blvd. Reinstatement:** A 3.25m typical width (TYP.) of grass boulevard reinstatement on the right side, indicated by a horizontal arrow.
- Excavation:** A trapezoidal excavation area with a 1:1 slope, indicated by a vertical arrow and a 1:1 slope triangle.
- Granular Bedding and Cover:** A 300mm granular bedding layer and a 300mm granular cover layer, indicated by horizontal arrows.
- Watermain:** A 150mm diameter DR18 PVC watermain, indicated by a vertical arrow.
- Removal and Replacement:** A 250mm full depth asphalt and granular base layer is removed and replaced with 50mm SP12.5 level B PGAC 58-34, 50mm SP19 level B PGAC 58-34, 150mm granular A, and 200mm granular B (watermain trench only).
- Drainage:** A 5% cross-fall (MAX 6%) is indicated by a horizontal arrow.
- Excavation Reference:** The excavation is performed per OPSD 802.031.
- Native Material:** Suitable native material or SSM backfill is used for the excavation.

*** REFER TO CROSS-FALL CORRECTION TABLE**

N.T.S.

[illegible]

TO BE READ IN CONJUNCTION WITH CONTRACT DOCUMENTS

Diagram illustrating the Asphalt Driveway Reinstatement process. The diagram shows a cross-section of a road and driveway. Key components and labels include:

- RECONSTRUCTED ROAD**: The main road surface, sloping at 2%.
- ASPHALT PAVEMENT DRIVEWAY**: The driveway surface, sloping at 5% (MAX 6%).
- SAW CUT AND FORM BUTT JOINT**: The joint between the reconstructed road and the driveway.
- EXISTING ASPHALT DRIVEWAY**: The existing driveway surface, sloping at 5% (MAX 6%).
- VARIES**: A section of the driveway apron, indicated by a double-headed arrow.
- 5% VARIES (MAX 6%)**: A label for the slope of the driveway apron.
- PLACE GRANULAR A TO FORM DESIRED GRADE, COMPACT TO MIN. 98% SDD**: A label for the granular material used in the driveway apron.

ASPHALT DRIVEWAY REINSTATEMENT:

1. SAW-CUT FULL DEPTH OF EXISTING ASPHALT DRIVEWAY AT LIMITS SHOWN IN CONTRACT DRAWINGS
2. REMOVE FULL DEPTH OF EXISTING ASPHALT PAVEMENT
3. PLACE MIN. 100mm GRANULAR A TO FORM DESIRED GRADE, COMPACT TO 98% SDD
4. PAVE NEW DRIVEWAY APRON TO MATCH EXISTING WITH 50mm SP 12.5
5. CONTRACTOR TO ENSURE POSITIVE DRAINAGE

N.T.S

Diagram illustrating the cross-section of a concrete driveway reinstatement. The diagram shows a reconstructed road on the left, transitioning into a concrete driveway reinstatement area. The existing concrete driveway is shown on the right, with a new concrete driveway pavement (SP-05) being installed over it. The new pavement is 150mm thick and includes 150mm x 150mm WM9.1 x WM9.1 wire mesh reinforcement 50mm from the base of the slab. The existing driveway has a 5% slope, and the new pavement has a 5% slope (max 6%). The width of the new pavement is indicated as 'VARIES'. The diagram is labeled 'N.T.S.' (Not To Scale).

Labels in the diagram:

- RECONSTRUCTED ROAD
- 2%
- 5% VARIES (MAX 6%)
- 5%
- EXISTING CONCRETE DRIVEWAY
- 150mm X 150mm WM9.1 X WM9.1 WIRE MESH REINFORCEMENT 50mm FROM BASE OF SLAB
- NEW CONCRETE DRIVEWAY PAVEMENT, PER SP-05 CONCRETE DRIVEWAYS MATCH RECONSTRUCTED ROAD EP TO EXISTING DRIVEWAY, ENSURE POSITIVE DRAINAGE
- PLACE GRANULAR A TO FORM DESIRED GRADE, COMPACT TO MIN. 98% SSD
- CONCRETE DRIVEWAY REINSTATEMENT:
- VARIES
- N.T.S.

Concrete Driveway Reinstatement:

1. SAW-CUT FULL DEPTH OF EXISTING CONCRETE DRIVEWAY AT NEAREST JOINT
2. REMOVE EXISTING CONCRETE SLAB BY LIFTING OUT OF PLACE
3. PLACE MIN. 150mm GRANULAR A TO FORM DESIRED GRADE, COMPACT TO 98% SSD
4. INSTALL 150mm X 150mm WM9.1 x WM9.1 REINFORCING STEEL MESH 50mm FROM BOTTOM
5. NEW CONCRETE PAVEMENT AT DRIVEWAY PER OPSS 350, MATCH EXISTING DIMENSIONS - MIN 100mm THICK
6. PLACE AND CURE CONCRETE PER OPSS 350, EXPOSED CONCRETE SURFACE SHALL RECEIVE A BRUSHED FINISH
7. CONTRACTOR TO ENSURE POSITIVE DRAINAGE

RECONSTRUCTED ROAD

EXISTING GRANULAR DRIVEWAY

2%

5% VARIES (MAX 6%)

5%

VARIES

GRAVEL DRIVEWAY REINSTATEMENT:

1. REMOVE / RE-GRADE EXISTING GRANULAR AT DRIVEWAY TO FORM DESIRED GRADE
2. PLACE MIN. 150mm NEW GRANULAR A, COMPACT TO 98% SDD
3. CONTRACTOR TO ENSURE POSITIVE DRAINAGE

N.T.S.

The diagram illustrates the process of reinstating a unit paver driveway. It shows a cross-section of the road and driveway. The road surface is labeled 'RECONSTRUCTED ROAD' and has a 2% slope. The driveway is labeled 'EXISTING UNIT PAVER DRIVEWAY' and has a 5% slope. The process involves placing granular material and bedding sand to form a desired grade, compacting it to a minimum of 98% SDD. The reinstatement is done in layers: a 20-30mm leveling course of bedding sand, followed by unit pavers, and a final joint sand layer. The diagram also shows the removal of existing unit pavers and the placement of new ones, with a note that the process is complete with new edge restraints. The final step is to ensure positive drainage.

RECONSTRUCTED ROAD

2%

5% VARIES (MAX 6%)

EXISTING UNIT PAVER DRIVEWAY

5%

VARIES

UNIT PAVER DRIVEWAY REINSTATEMENT:

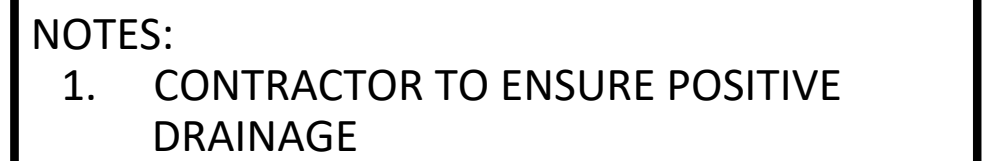
1. REMOVE AND SALVAGE UNIT PAVERS FROM DRIVEWAY TO LIMITS SHOWN IN CONTRACT DRAWINGS, STORE SEPARATELY BESIDE SOURCE DRIVEWAY
2. PLACE MIN 100mm GRANULAR A TO FORM DESIRED GRADE, COMPACT TO 98% SDD
3. PLACE 20-30mm LEVELING COURSE OF BEDDING SAND PER OPS 355
4. REINSTATE EXISTING UNIT PAVERS AT DRIVEWAY PER OPS 355 COMPLETE WITH NEW EDGE RESTRAINTS, MATCH EXISTING PATTERN
5. PLACE JOINT SAND AT UNIT PAVERS PER OPS 355
6. CONTRACTOR TO ENSURE POSITIVE DRAINAGE

N.T.S

The diagram illustrates a cross-section of a road surface repair at a lap joint. The existing road structure consists of an asphalt surface and a granular road base. The repair process involves the following steps and components:

- EXISTING ASPHALT (+/- 100mm)**: The existing surface layer on the left side of the joint.
- EXISTING GRANULAR ROAD BASE**: The base layer beneath the existing asphalt.
- SURFACE COURSE LAP JOINT**: The horizontal interface between the existing and new asphalt.
- PARTIAL DEPTH ASPHALT REMOVAL AT EXISTING ASPHALT**: A 50mm wide strip of the existing asphalt is removed at the joint.
- SAW-CUT FULL DEPTH AT EXISTING ASPHALT**: A full-depth cut is made in the existing asphalt, extending into the granular base.
- NEW ASPHALT PAVING**: The new surface layer, consisting of:
 - 50mm SP12.5**: A 50mm thick layer of surface course.
 - 50mm SP19**: A 50mm thick layer of binder course.
 - 150mm GRANULAR 'A'**: A 150mm thick layer of granular material.
- 1:1 TAPER**: A tapered transition between the new asphalt layers and the granular base.
- APPLY TACK COAT TO VERTICAL AND HORIZONTAL FACES OF EXISTING ASPHALT**: A tack coat is applied to the vertical face of the existing asphalt and the horizontal face of the new asphalt.

N.T.S. (Not To Scale)



Check and verify all dimensions before proceeding with the work	Do not scale drawings
---	-----------------------

Stamp:	Stamp:
--------	--------

Project:

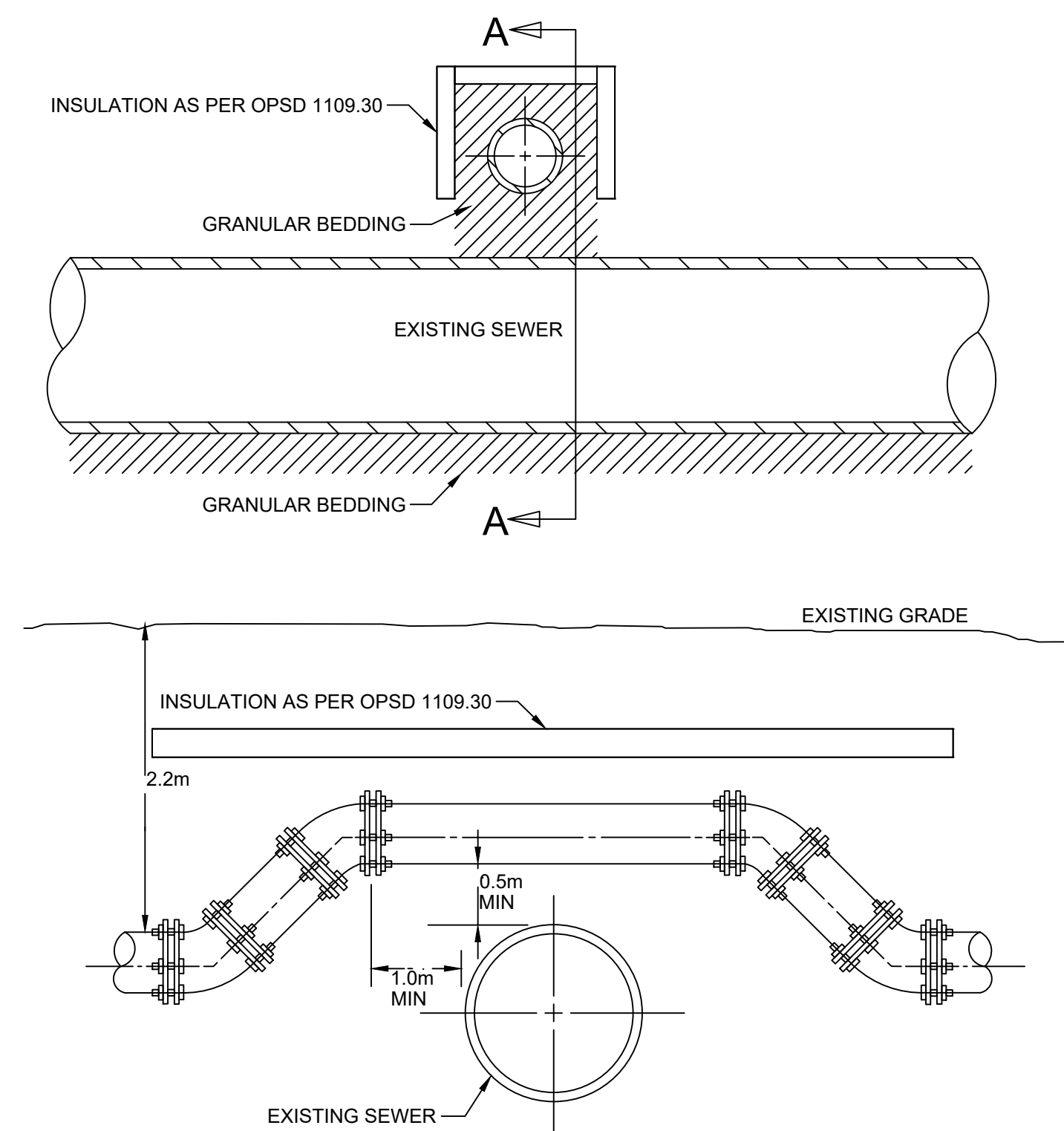
RENFREW

ONTARIO

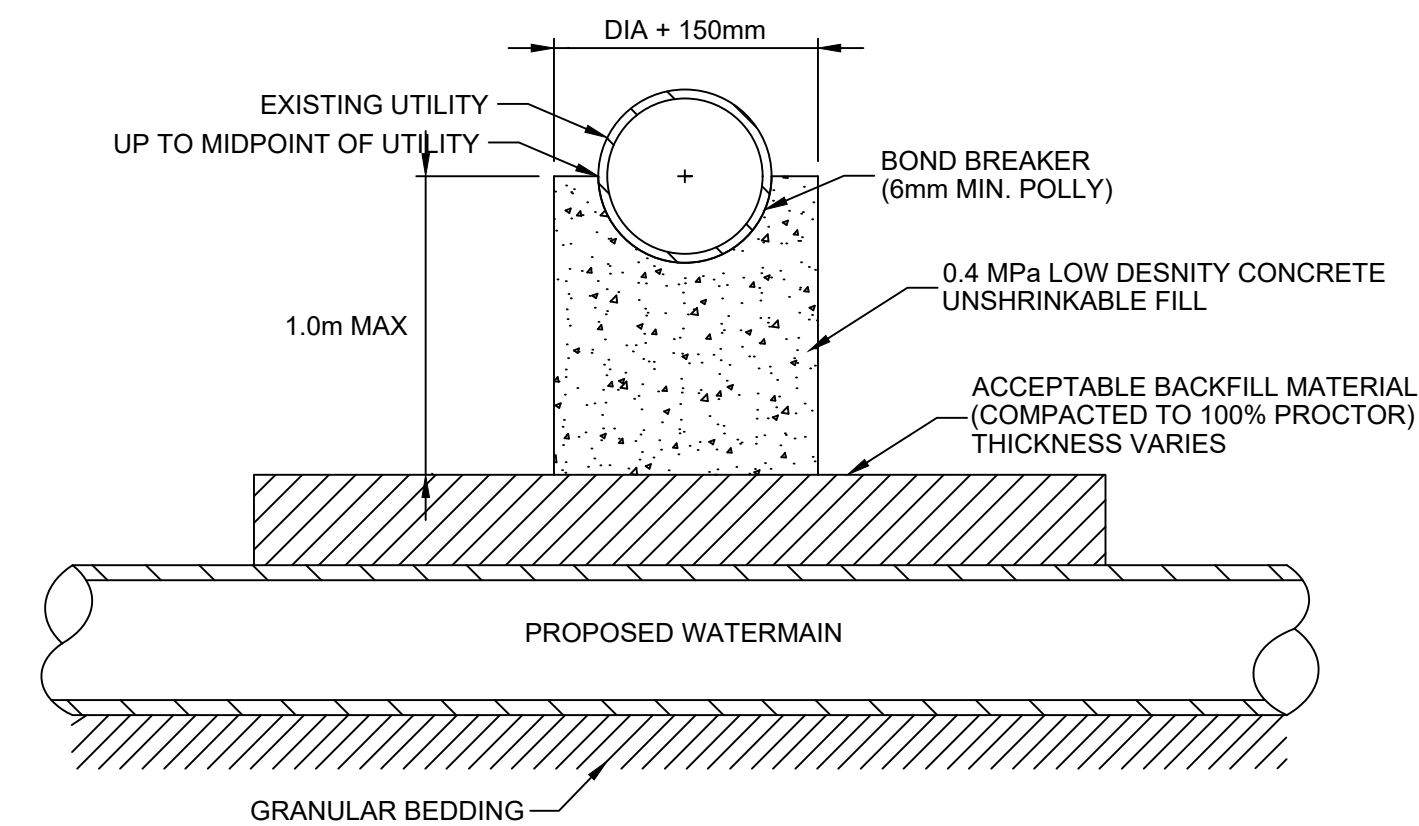
Drawing Title:		TYPICAL SECTIONS AND DETAILS	
Scale:	N.T.S.	Project Number:	2024-23-DEI
Drawn by:	MV		
Checked By:	AS		
Designed By:	MV	Drawing Number:	C-03
Date:	OCTOBER 11, 2024	SHEET 3 of 4	

FILENAME: C:\Users\m.verch\OneDrive - EGIS Group\CCO-25-1086 Renfrew - Seventh St\04 CAD & GIS\03 - Contract Drawings\25-1086-NEW.dwg
LAST SAVED: Friday, October 11, 2024 LAST SAVED BY: m.verch

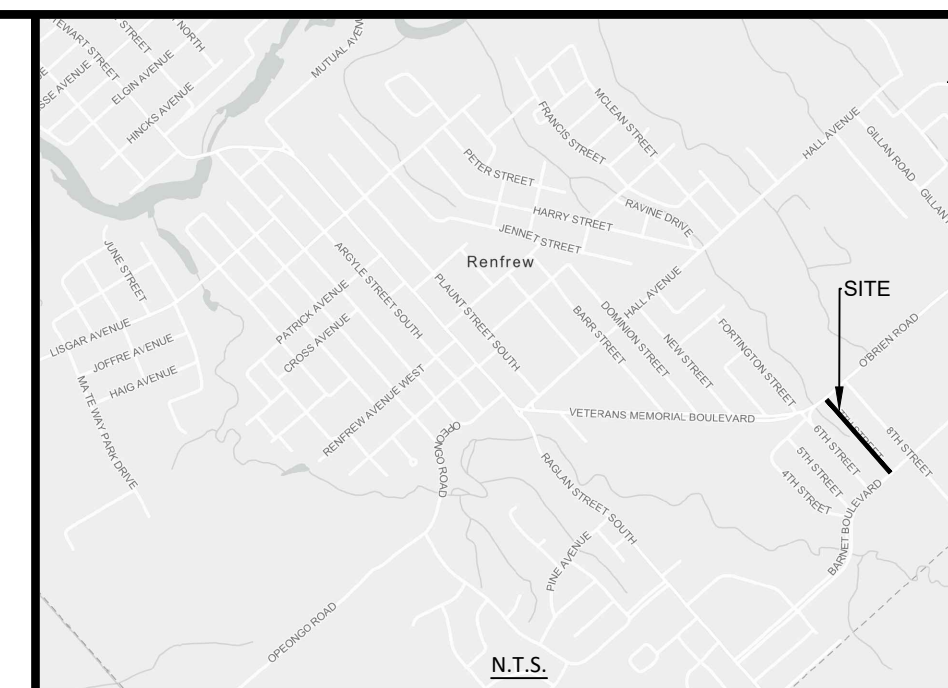
BARNET BOULEVARD



SECTION A-A
WATERMAIN CROSSING OVER
EXISTING UTILITY



WATERMAIN CROSSING UNDER EXISTING UTILITY



NOTES:

1. CONTRACTOR TO CONFIRM EXISTING WATERMAIN MATERIALS / ELEVATIONS IN THE FIELD.
2. CONTRACTOR TO CONFIRM SANITARY SEWER INVERT IN THE FIELD.
3. CONTRACTOR TO PROVIDE SEPARATION TO THE EXISTING SEWER AS NOTED.
4. CONTRACTOR TO PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

2	RE-ISSUED FOR DESIGN REVIEW	2024-10-1
1	ISSUED FOR PREMILIARY DESIGN REVIEW	2024-05-3

Check and verify all dimensions before proceeding with the work	Do not scale drawing
---	----------------------



115 Walgreen Road
RR3, Carp, ON K0A 1L0
Tel: 613-836-2184
Fax: 613-836-3742

Stamp:	Stamp:
--------	--------

Client:  **Renfrew**
INC - 1850 *Bridging Charm and Convenience*

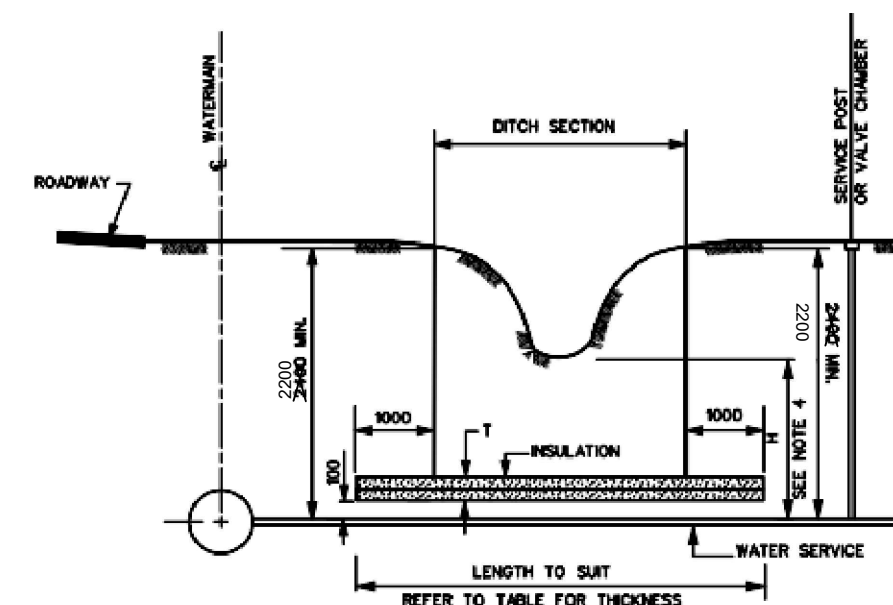
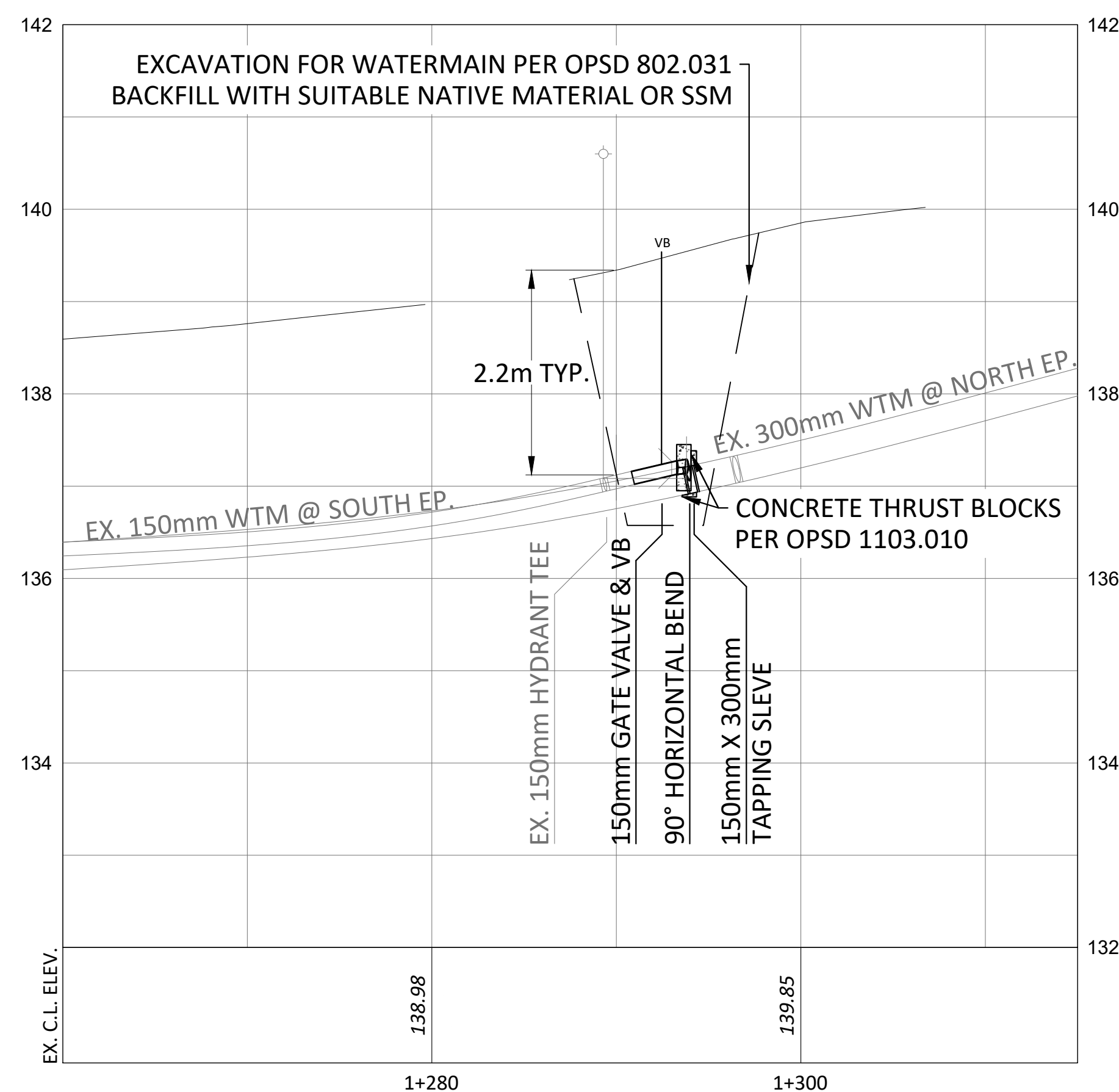
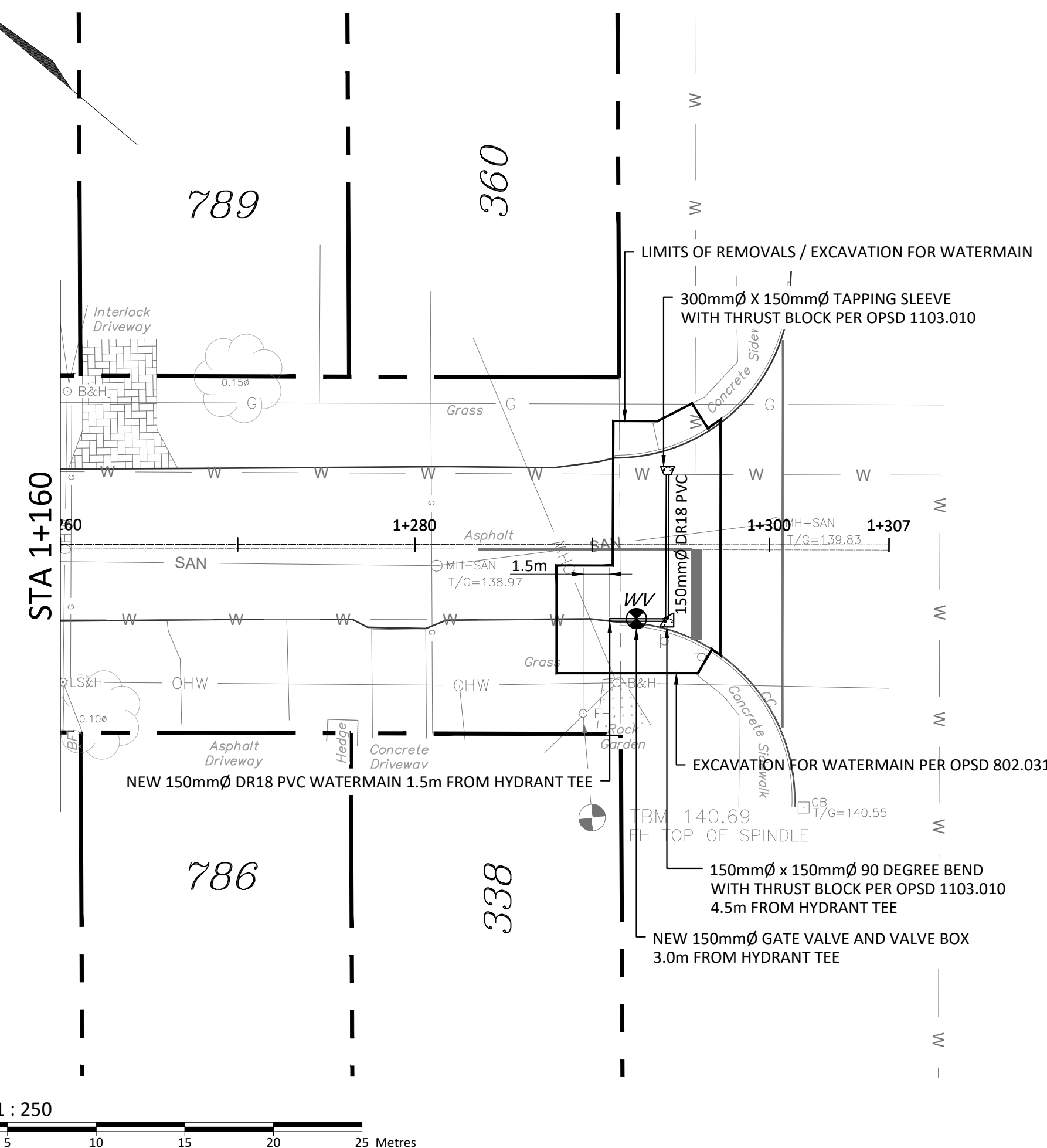
Project:

SEVENTH STREET ROAD RECONSTRUCTION

RENFREW ONTARIO

Drawing Title:
NEW CONSTRUCTION

Scale: 1:250	Project Number:	2024-23-DE
Drawn by: MV		
Checked By: AS		
Designed By: MV	Drawing Number:	
Date: OCTOBER 11, 2024	SHEET 4 of 4	C-04



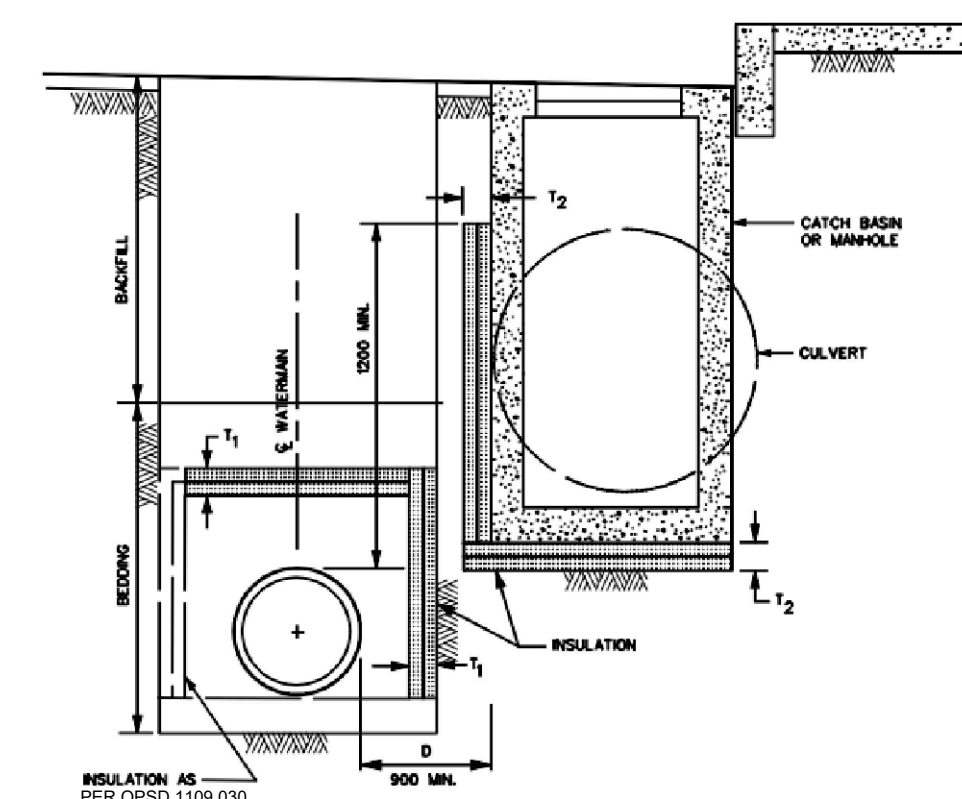
INSULATION REFERENCE TABLE	
EFFECTIVE EARTH COVER (H)	REQUIRED THICKNESS (T)
2200 2400 - 1800 mm	50 mm
1800 - 1500 mm	75 mm
1500 - 1200 mm	100 mm

FOR MAINS & SERVICES IN DITCHED AREAS WHERE DEPTH OF COVER OR SEPARATION IS LESS THAN 2200mm

1. INSULATION SHALL BE MINIMUM 1200mm WIDE AND SHALL BE CENTERED OVER THE PIPE.
2. INSULATION SHALL EXTEND 1000mm BEYOND THE DEFINED DITCH SECTION.
3. DEPTH OF COVER LESS THAN 1200mm REQUIRED SPECIAL DESIGN.
4. DIMENSION "H" TO BE 1200mm MINIMUM
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

THERMAL INSULATION IN DITCHED AREAS DETAIL

INSULATION REFERENCE TABLE	
D DISTANCE FROM C.B. OR M.H. WALL	T REQUIRED INSULATION THICKNESS $T = T_1 + T_2$
2400 - 1800 mm.	50 mm
1800 - 1500 mm.	75 mm
1500 - 1200 mm.	100 mm
1200 - 900 mm.	125 mm



FOR WATERMAINS & SERVICES IN PROXIMITY TO CATCHBASINS, MAINTENANCE HOLES, CULVERTS ETC.

1. INSULATION SHALL EXTEND 1000mm EACH WAY FROM THE ENDS OF THE STRUCTURE, PARRALLED TO THE WATERMAIN.
2. STAGGER JOINTS OF MULTIPLE SHEETS
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
4. INSULATION CAN BE AT EITHER LOCATION OR BOTH.

THERMAL INSULATION OF WATERMAINS AT OPEN STRUCTURES DETAIL